electrical condition of the muscles was altered. Ultimately the limb generally became atrophied, with diminished temperature; the skin and some of the muscles were reduced in volume; the subcutaneous tissues were sclerosed and white, and the blood-vessels presented contractions and dilatations of their lumen. Microscopical examination confirmed the observation of primary vascular dilatation and secondary sclerosis around the vessels. In some of the experiments excess of irritation caused muscular paralysis of the limb, complicating, but practically confirming, the observation. The absence of paralysis and anæsthesia in the best cases suggested the absence of vaso-motor paralysis, and the presence of vaso-dilator irritation. The variety of results obtained confirmed this view, as well as the rapidity of their development and the degree to which they advanced.—Dr. J. M. Bruce, *Brain*, part xxii.

HERPES.—Nieden has described a remarkable case of recurrent herpes in the region of the ophthalmic division of the left trigeminus after lesion of the cervical spine. A man who had sustained an injury in the neighborhood of the superior cervical ganglion, and who for the next six years had suffered from severe attacks of cephalalgia and ciliary neuralgia, became subject to eruptions of herpes in connection with the left eye. The cornea and the skin, corresponding to the supra-orbital and supra-trochlear nerves, were the seats of the herpes, whilst the nasal area was spared. During the next six years the eruption recurred four times, and, as in the first attack, it was always accompanied by paresis of the vessels of the left half of the face, periodical headache, hyperæsthesia of the skin, and palpitation of the heart. No doubt the left cervical sympathetic was paralyzed, with consequent neurosis of the first division of the trigeminus.—Dr. J. M. Bruce, *Brain*, part xxii.

CONTUSIONS OF THE BRAIN AND SPINAL CORD.—An extensive article, with numerous cases illustrative of the above subject from the pen of Dr. John A. Liddell, appears in the *American Journal of Medical Sciences* for July. The author says: (1) Whenever contusion of the brain is produced the lesion of the brain substance is usually found either directly underneath the scalp-wound, *i. e.*, directly underneath the external point of impact, or on exactly the opposite side of the encephalon. The latter often occurs, and is truly said to be caused by the *contre-coup*. (2) Bruises of the cortical portion of the brain and pia mater, when exposed to view, oftentimes do not differ much in appearance from bruises of the subcutaneous connective tissue, for both injuries alike are attended by ecchymosis. In numerous instances, however, there is much more copious extravasation of blood in cases of cerebral contusion than that which occurs in ordinary ecchymosis, and not unfrequently this extravasation proceeds so far as to cause death,

per se, by compressing the brain. Such sanguinolent extravasations are met with (*a*) beneath the so-called visceral arachnoid membrane, *i. e.*, with meshes of the pia mater, and furrows of the brain; (*b*) in the so-called cavity of the arachnoid membrane, *i. e.*, on the free surface of that membrane; (*c*) in the ventricles of the brain; (*d*) to the foregoing must be added those minute extravasations of blood (having the size of millet seeds) which are occasionally found disseminated in great numbers through the brain substance deeply as well as superficially. (3) Bruises of the brain often cause traumatic encephalitis, which eventuates either in subsidence and recovery, or in suppuration and cerebral abscess, or in permanent disturbances of the mental faculties, sometimes accompanied also by epileptiform convulsions. Again, he concludes: (1) that all severe concussions of the brain are very apt to be complicated with contused wounds (bruises) of the brain substance; and (2) that such wounds of the brain are in turn apt to eventuate in cerebral inflammation or encephalitis. In circumscribed contusions which are especially liable to follow blows on the head with instruments of small compass, such as hammers, spent balls, stones, brick-bats, etc., the brain-wounds will usually be found situated directly underneath the point of impact of the vulnerating force upon the exterior of the skull. The author refers to ten classes of cases which he considers important, though they have hitherto received but scanty mention. A laborer, for example, receives a blow on the head from a sharp corner of a stone which knocks him down. He is considerably stunned for a moment, but soon rallies, and gets up without assistance. His scalp is found to be slightly wounded, but there is no fracture. Although he has considerable pain in the injured part, and is quite giddy, he at once returns to his work; and although his headache, etc., persist, he still continues to work. The wounded scalp readily heals. He goes on in this way some two or three weeks, perhaps longer; then he suddenly becomes seized with intense cephalalgia and rigors, rapidly followed by hemiplegia and coma; or the paralysis and insensibility may supervene without rigors, and without any great increase of headache. Death soon ensues, and the autopsy reveals directly beneath the cicatrix of the scalp-wound the traces of a circumscribed ecchymosis in the pia mater and cortical substance; and deeper still a cerebral abscess. Such cases, he believes, are much less rare than is generally supposed, and may be saved by trephining and evacuating the abscess by puncture or aspiration.

Respecting contusions of the brain by *contre-coup* the author concludes: (1) that in a large majority of the instances where contusions of the brain are produced by falling on the head, it is caused by the *counter-stroke*, and presents itself on the side of the head opposite to that which receives the blow; (2) in accounting for the *energy* of the counter-stroke in such cases, it should be remembered that the brain does not completely fill the cranial cavity, for there is a considerable space surrounding it, em-

braced, for the most part, by the muscles of the pia mater, which is constantly filled with cerebro-spinal fluid ; (3) cerebral abscesses sometimes form on the side of the head opposite to that which has been struck. They generally cause some symptoms which should excite a suspicion of their presence. These symptoms are fixed pain at the seat of injury by *contre-coup*, paralysis of an arm or leg, and even complete hemiplegia on the side of the body opposite the seat of fixed pain in the head—*i. e.*, on the same side of the body as the part of the head that received the blow,—together with irregular shiverings and fever. The doctrine of cerebral localization may also furnish important aid in determining the site of such an abscess.

SECONDARY DEGENERATION OF THE PONS MEDULLA AND CORD.—C. Horner gives the following conclusions (*Arch. f. pract. Anat. und. Phys.*, Bd. lxxviii, p. 61) concerning his research on the above subject: 1st. The earliest degeneration changes are found, not in medullary sheaths of the nerve fibres, but in the axis-cylinder. 2d. The presence of degeneration in the cord may be demonstrated with certainty three weeks after the formation of the cerebral lesion. At this period an abundant proliferation of nuclei may be present. 3d. A secondary degeneration process also takes place in the *lemniscus layer* (Schleifenschicht). 4th. A moderate atrophy in the gray substance of the anterior horn, as well as a slight degeneration of the anterior roots on the affected side, may occur without apparent modification of the ganglion cells forming the anterior horn.—*Rev. des sci. méd.*, No. 43.

SOFTENING OF THE PONS ; SECONDARY DEGENERATION OF THE TRANSVERSE FIBRES ; DESCENDING DEGENERATION.—Dr. Ch. Féré exhibited to the Soc. Anatomique the pons and medulla of a woman aged eighty-five years, who had been affected for eight years with right hemiplegia, with contraction involving the face. In the pons was a small lenticular cavity filled with serum, located on the left side against the raphe, a little in front of the junction of the anterior with the posterior two thirds of the antero-posterior axis of the pons. The sides of the cavity possessed a slightly yellowish tint. A depressed tract of a yellowish-gray color starts from each side of the depression, to the width of which it exactly corresponded about the median line, while outward it gradually tapered, to be lost in the base of the cerebellum peduncle. Its color appeared like that found in degenerated tracts of the pyramids. Besides this degeneration of the transverse fibres of the pons, a well-marked degeneration of the left pyramid existed. The existence of an homonymous facial paralysis in this case may be explained by the fact that the lesion was situated toward the superior part of the pons, probably above the point where the decussation of the fibres of the facial tract decussate.—*Progrès méd.*, No. 27.